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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,888	03/29/2004	Tomohiro Satoh	000409-109	1075

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EXAMINER

SCHNEIDER, CRAIG M

ART UNIT	PAPER NUMBER
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3753

DATE MAILED: 05/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/810,888

Applicant(s)

SATO, TOMOHIRO

Examiner

Craig M. Schneider

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/29/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.84(a) because they fail to show the hatching to depict the solid area of the cross section for the spool in Figures 2, 3, 4a, 4b, 4c, 7, and 9 as described in the specification. The drawings further do not render obvious in light of the specification what is depicted on the inner right side of the spool adjacent the hash mark in Figures 3, 4a, 4b, and 4c. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "21e and 21f" has been used to designate both a concave cutout on the left side of the spool in Figure 3 and 4a and the inner side of the right side of the spool which appears to be a convex cutout in Figure 3 and 4a. "21e and 21f" are further depicted as cutouts of the body in Figure 9. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if

only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: On page 5, line 1 "linier" should be --linear--.

On page 7, line 9 "21" should be --21b--.

Appropriate correction is required.

Claim Objections

4. Claim 8 is objected to because of the following informalities: In line 5 "pressure p for" should be --pressure for--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by McWilliams et al. (3,556,155)).

McWilliams et al. disclose a hydraulic pressure control device comprising a cylindrical valve body (18), at least one opening portion provided on the valve body, a

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spool valve (22) disposed in the valve body and slidable along an inner surface of the valve body, at least one land portion provided at the spool valve and slidable along the inner surface of the valve body, and at least one recess provided at an edge of the land portion of the spool valve wherein the cross-sectional opening area between the recess and the inner surface of the valve body continuously changes in sliding direction of the spool valve (col. 2, line 1 to col. 3, line 6).

7. Claim 5 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over McWilliams et al.

The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product in the prior art, the claim is unpatentable even though the prior product was made by a different process (see MPEP 2113).

8. Claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Christensen et al. (4,981,159).

Christensen et al. disclose a hydraulic pressure control device comprising a cylindrical valve body (3), at least one opening portion provided on the valve body, a spool valve (1) disposed in the valve body and slidable along an inner surface of the valve body, at least one land (6) portion provided at the spool valve and slidable along the inner surface of the valve body, and at least one recess (4 and 5) provided at a wall (shape of 14 and 15) of the inner surface of the valve body facing the outer surface of the spool valve wherein the cross-sectional opening area between the recess and the

outer surface of the valve spool continuously decreased in sliding direction of the spool valve from the opening portion (col. 3, line 55 to col. 4, line 10).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wakahara et al. (5,819,192) in view of McWilliams et al..

Wakahara et al. disclose a hydraulic pressure control device comprising a friction engagement means including a drive rotor (58c) and a driven rotor (58a), a piston (58e) pushing a plurality of clutch discs (58b and 58d) between the drive rotor and a driven rotor and engaging the drive rotor with the driven rotor, a hydraulic pressure chamber (58f) defined by the hydraulic pressure for changing a pushing force of the piston (col. 3, line 40 to col. 4, line 9), a hydraulic pressure control mechanism (40) controlling hydraulic pressure to be supplied to the hydraulic pressure chamber, a cylindrical valve body (40b) provided at the hydraulic pressure control mechanism, at least one opening portion provided on the valve body, a spool valve (40G) disposed in the valve body and slidable along an inner surface of the valve body, at least one land portion provided at the spool valve and slidable along the inner surface of the valve body (col. 10, lines 29-65). Wakahara et al. does not disclose at least one recess provided at an edge of the

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land portion of the spool valve wherein cross sectional opening area between the recess and the inner surface of the valve body continuously changes in sliding direction of the spool valve. McWilliams et al. disclose at least one recess provided at an edge of the land portion of the spool valve wherein cross-sectional opening area between the recess and the inner surface of the valve body continuously changes in sliding direction of the spool valve.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the recess of McWilliams et al. onto the spool of Wakahara et al., in order to have more control of the fluid that is passing through the valve instead of a sudden surge (col. 1, lines 39-49).

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wakahara et al. (5,819,192) in view of Christensen et al..

Wakahara et al. disclose a hydraulic pressure control device comprising a friction engagement means including a drive rotor (58c) and a driven rotor (58a), a piston (58e) pushing a plurality of clutch discs (58b and 58d) between the drive rotor and a driven rotor and engaging the drive rotor with the driven rotor, a hydraulic pressure chamber (58f) defined by the hydraulic pressure for changing a pushing force of the piston (col. 3, line 40 to col. 4, line 9), a hydraulic pressure control mechanism (40) controlling hydraulic pressure to be supplied to the hydraulic pressure chamber, a cylindrical valve body (40b) provided at the hydraulic pressure control mechanism, at least one opening portion provided on the valve body, a spool valve (40G) disposed in the valve body and slidable along an inner surface of the valve body, at least one land portion provided at

the spool valve and slidable along the inner surface of the valve body (col. 10, lines 29-65). Wakahara et al. does not disclose at least one recess provided at a wall of the inner surface of the valve body facing the outer surface of the spool valve wherein cross sectional opening area between the recess and the outer surface of the spool valve is continuously decreased in sliding direction of the spool valve from the opening portion. Christensen et al. disclose at least one recess provided at a wall of the inner surface of the valve body facing the outer surface of the spool valve wherein the cross-sectional opening area between the recess and the outer surface of the spool valve is continuously decreased in sliding direction of the spool valve from the opening portion.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the recess in the wall of Christensen et al. onto the wall of the spool valve of Wakahara et al., in order to have more control of the fluid that is passing through the valve instead of a sudden surge.

Conclusion

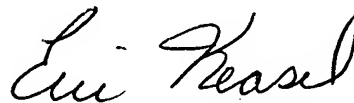
12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jefferies (318,000), Mock (2,952,275), Junck et al. (2,971,536 and 3,198,212), and Kemmner et al. (6,666,225) disclose recesses in the spool valve. Boecking (6,067,955), Brenk et al. (6,637,409), and Ogura et al. (2003/0221731) disclose recesses in the wall of the cylinder.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig M. Schneider whose telephone number is (571) 272-3607. The examiner can normally be reached on M-F 8:30 -5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CMS CMV
May 2, 2006



ERIC KEASEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700